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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,841	12/31/2001	Toshihiko Yamashita	Yamashita-112-048	8728

7590 06/09/2005

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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/926,841

Applicant(s)

YAMASHITA ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Desrondiers (US 5,894,045).

Desrondiers is directed to a cellular core structure building element having a three-dimensional arrangement of pyramidal elements in a continuous rectangular pattern interconnected at their bases by a base plane panel. The common pyramid structure is modified by truncating the top of the pyramid to form a top face (Abstract). See Figures 1 – 5.

4. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US 3,086,899).

Smith is directed to a constructional lamina (Title) having a plurality of depressions having a pyramidal configuration which is truncated to provide a flat apex (column 2, lines 10 – 40). The depressions may be open (column 2, lines 60 – 65). See Figures 1 – 3.

5. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Morikawa Hiroshi et al. (JP 11257048).

Morikawa Hiroshi is directed to a metal filter having a series of protruding portions which are provided with through holes each having burrs formed therearound (Abstract). See Figure 1.

6. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by McMillan (US 3,899,805).

McMillan is directed to a indented sheet having a surface of repeating hollow projections and repeating pocket areas or valleys, at least certain of the pocket areas having a restricted neck opening defined by the side profile of the projections in adjacent positioning thereto (Abstract). See Figures 1 – 5. McMillan teaches that the projection may have a pyramidal shape (column 1, lines 45 – 55).

7. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Borgford (US 3,914,486).

Borgford is directed to shear form structures (Title), which are stamped or formed from any desired material and consists of a plurality of three-sided half cubes interconnected together by bases thereof (Abstract). The apices of the half cubes are flattened and may be apertured for weight purposes (Abstract). See Figure 1.

***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 3,086,899).

Smith is directed to a constructional lamina (Title) having a plurality of depressions having a pyramidal configuration which is truncated to provide a flat apex (column 2, lines 10 – 40). The depressions may be open (column 2, lines 60 – 65). See Figures 1 – 3. Smith discloses the claimed invention except for thickness is between 10 – 50 micrometers, longitudinal length of the openings is 360 – 510 microns and the opening ratio is between 45 – 60%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a substrate with a thickness of 10 – 50 micrometers, an opening length of 360 to 510 micrometers and an opening ratio between 45 – 60% since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness, opening length and opening ratio in order to create substrate with an optimal level of porosity and flexibility.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over McMillan (US 3,899,805).

McMillian is directed to a indented sheet having a surface of repeating hollow projections and repeating pocket areas or valleys, at least certain of the pocket areas having a restricted neck opening defined by the side profile of the projections in adjacent positioning thereto (Abstract). See Figures 1 – 5. McMillian teaches that the projection may have a pyramidal shape (column 1, lines 45 – 55). McMillian discloses the claimed invention except for thickness is between 10 – 50 micrometers, longitudinal length of the openings is 360 – 510 microns and the opening ratio is between 45 – 60%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a substrate with a thickness of 10 – 50 micrometers, an opening length of 360 to 510 micrometers and an opening ratio between 45 – 60% since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness, opening length and opening ratio in order to create substrate with an optimal level of porosity and flexibility.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morikawa Hiroshi et al. (JP 11257048).

Morikawa Hiroshi is directed to a metal filter having a series of protruding portions which are provided with through holes each having burrs formed therearound (Abstract). See Figures 1 and 2 for illustration of a quadrangular pyramidal shape. Morikawa discloses the claimed invention except for thickness is between 10 – 50 micrometers, longitudinal length of the openings is 360 – 510 microns and the opening ratio is between 45 – 60%. It would have

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been obvious to one having ordinary skill in the art at the time the invention was made to create a substrate with a thickness of 10 – 50 micrometers, an opening length of 360 to 510 micrometers and an opening ratio between 45 – 60% since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness, opening length and opening ratio in order to create substrate with an optimal level of porosity and flexibility.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jennifer Boyd  
June 2, 2005

  
**Ula C. Ruddock**  
Primary Examiner  
Tech Center 1700